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EXAMINER
DAYE, CHELCIE L

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/617,141	KAISER ET AL.
	Examiner	Art Unit	
	Chelcie Daye	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 October 2006</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,8,10,11,13,14,16,17 and 20-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,8,10,11,13,14,16,17,and 20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is issued in response to applicant's amendment filed October 2, 2006.

2.   Claims 1-22 are presented. Claims 21 and 22 are added and claims 2,5-

7,9,12,15,18,and 19 are cancelled.

3.   Claims 1,3,4,8,10,11,13,14,16,17,and 20-22 are pending.

Continued Examination Under 37 CFR 1.114

4.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August

29, 2006 has been entered.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 1,11,and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the written description requirement. The claim(s) contains subject

matter, which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention.

Specifically, claims 1,11,and 17, have been amended to further include the

limitation of "a first and a second intermediary nodes". However, examiner is unable to

locate the specific or related terminology of "intermediary nodes" and exactly what the

functions of an intermediary node consist of. Applicant has provided a detailed

explanation of the connection between the successor node, predecessor node, and first

and second intermediary nodes, but has not provided any evidence within the

specification to support such a detailed description. Therefore, in order to further

prosecution examiner will give the broadest reasonable interpretation for the phrase

"intermediary nodes" and the connection between the intermediary nodes in relation to

the successor node and the predecessor node.

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter, which the applicant regards as his invention.

8.   Claims 8,13,and 22 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claim 8 recites the limitation "the relational information" in the second line of the claim, examiner is unsure as to what "relational information" applicant is referring to, since there is no prior mention of such information. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites, "comparing the first and the second sequences of nodes to the query", wherein the comparing is dependent upon the previous claim 11 from which it depends, which recites, "comparing the query to the first or the second sequences of nodes". Examiner would like to point out that the term "or" in claims 1,11, and 17 are alternative language which renders the claims indefinite. Therefore, examiners assumption is to at least satisfy one of the limitations listed in order to gratify the scope of that particular limitation. Thus with reference to claims 1,11,and 17, as long as the query is compared to either the first sequence of nodes or the second sequence of the nodes the limitation is covered. However, the recitation of claim 13 requires the comparison of both the first and the second sequences of nodes. Examiner is uncertain of the inconsistency between the two claims. Further clarifications and corrections are needed.

Claim 22 recites, "accessing the first and the second sequences of nodes", wherein the accessing is dependent upon the comparing of the query to the first or the second sequences of nodes. Again, as stated above, examiner is unclear of the need to access both the first and the second sequences of nodes when both of the sequences of nodes were not needed in order to do the step before the accessing. Therefore, further clarifications and corrections are needed.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10.   **Claims 1,8,11,13,16,17,21,and 22 are rejected under 35 U.S.C. 102(e) as**

being anticipated by Barnes (US Patent No. 6,931,418) issued August 16, 2005.

Regarding Claims 1,11,and 17, Barnes discloses a method comprising:

storing data objects as nodes in a hierarchically-structured, multi-

dimensional directed graph (column 5, lines 10-22, Barnes), the directed graph

including a predecessor node, a first and a second intermediary nodes, and a

successor node (Fig.4A; column 5, lines 25-31, Barnes)[1], the successor node

connected to the predecessor node via a first sequence of nodes including the

successor node, the first intermediary node, and the predecessor node (Fig.4A,

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[1] Examiner Notes: Within Fig.4A, item 401 represents the predecessor node, item 411 represents the successor node, and item 403 and 404 represent a first and second intermediary nodes, respectively.

Barnes)[2] and a second sequence of nodes including the successor node, the

second intermediary node, and the predecessor node (Fig.4A, Barnes)[3];

storing, for the successor node, the first and the second sequences of

nodes (column 5, lines 33-41, Barnes);

receiving a query involving the successor node (columns 14-15, lines 60-

67 and 1-8, respectively, Barnes);

comparing the query to the first or the second sequence of nodes (column

14, lines 13-17, Barnes); and

resolving the query based upon comparing the query to the first or the

second sequence of nodes (Fig.4B; column 14, lines 17-27, Barnes).

Regarding Claim 8, Barnes discloses the method wherein storing the first

and the second sequences of nodes comprises transforming the relational

information into a coded value (column 14, Table 4, Barnes).

Regarding Claim 13, Barnes discloses the apparatus wherein the fourth

code segment includes a sixth code segment for detecting the successor node

within the directed graph (column 16, lines 32-34, Barnes) and comparing the

first and the second sequences of nodes to the query (column 14, lines 13-17,

Barnes).

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[2] Examiner Notes: Within Fig.4A, the successor node (411) is connected to the predecessor node (401) via a first sequence of nodes (401-403-408-411); wherein the first intermediary node (403) is included.

Regarding Claim 16, Barnes discloses the apparatus wherein the second

code segment stores the first and the second sequences of nodes as a coded

value generated from information about the predecessor node, the first and the

second intermediary nodes, and the successor node (column 14, Table 4,

Barnes) and their locations within the directed graph (column 5, lines 25-41,

Barnes).

Regarding Claim 21, Barnes discloses the method wherein the first

sequence of nodes is different from the second sequence of nodes (Fig.4A,

Barnes)[4].

Regarding Claim 22, Barnes discloses the method wherein comparing the

query to the first or the second sequence of nodes further includes accessing the

first and the second sequences of nodes (column 9, lines 38-42, Barnes).

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

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[3] Examiner Notes: Within Fig.4A, the successor node (411) is connected to the predecessor node (401)
via a second sequence of nodes (401-404-409-411); wherein the second intermediary node (404) is
included.
[4] Examiner Notes: Within Fig.4A, the first sequence of nodes is represented by nodes 401-403-408-411
and the second sequence of nodes are represented by 401-404-409-411, which are different from one
another.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barnes (US Patent No. 6,931,418) filed March 26 2002, in view of Tang (US Patent No. 5,454,102) filed January 19, 1993.

Regarding Claim 3, Barnes discloses storing data objects in a data table (column 10, lines 53-60, Barnes). However, Barnes is not as detailed with respect to storing each data object in a first column of a data table; and storing a relation of a first data object to a consecutive data object in a second field of the data table, where the consecutive data object is connected to the first data object in the directed graph by a single edge. On the other hand, Tang discloses storing each data object in a first column of a data table (Fig.8, item 84, Tang); and storing a relation (column 8, lines 54-59,Tang) of a first data object[5] to a consecutive data object[6] in a second field of the data table (Fig. 8, Tang), where the consecutive data object is connected to the first data object in the directed graph by a single edge (Fig. 9, items 204 and 205; column 10, lines 58-60, Tang). Barnes and Tang are analogous art because they are from the same field of computer databases for storing and retrieving data. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Tang's teachings into the Barnes system. A skilled artisan would

have been motivated to combine as suggested by Tang at column 2, lines 32-40,

in order to create a node network which allows for the preservation of structured

data along with the capabilities of storing and manipulating.

13.   Claims 4,10,14, and 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Barnes (US Patent No. 6,931,418) filed March 26 2002, in view

of Tang (US Patent No. 5,454,102) filed January 19, 1993, and further in view of

Schultz (US Patent No. 6,029,162).

Regarding Claim 4, the combination of Barnes in view of Tang, disclose all

of the claimed subject matter as stated above. However, the combination of

Barnes in view of Tang are silent with respect to storing the first and the second

sequences of nodes in a third field of the data table. On the other hand, Schultz

discloses storing the first and the second sequences of nodes in a third field of

the data table (Fig.13; Schultz)[7]. Barnes, Tang, and Schultz are analogous art

because they are from the same field of retrieving data from relational databases.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to incorporate Schultz's teachings into the Barnes in view of Tang

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[5] Examiner Notes: The first data object corresponds to Recipient #1.
[6] Examiner Notes: The consecutive data object corresponds to Facsimile.
[7] Examiner Notes: Within Fig.13, the source column represents the predecessor node, the destination column represents the successor node, and the path column represents the sequence of nodes. The first sequence of nodes are represented by the first Chicago to Los Angeles path information (within the first row of the table) and the second sequence of nodes are represented by the second Chicago to Los Angeles path information (within the fourth row of the table), all disclosed within the third field of the data table.

system. A skilled artisan would have been motivated to combine as suggested by

Schultz at column 3, lines 55-57, in order to provide a system for calculating

actual paths and path lengths through a graph representable using tables.

Regarding Claim 10, the combination of Barnes in view of Tang, and

further in view of Schultz, disclose the method wherein storing the first and the

second sequences of nodes comprises updating the first and the second

sequences of nodes to reflect changes in the directed graph (column 7, lines 10-

41, Schultz).

Regarding Claim 14, the combination of Barnes in view of Tang, and

further in view of Schultz, disclose the apparatus wherein the first and the second

sequences of nodes are stored in a separate column of a single row of a table

than the successor node (Fig.13; Schultz).

Regarding Claim 20, the combination of Barnes in view of Tang, and

further in view of Schultz, disclose the system wherein the means for comparing

the query to the first or the second sequence of nodes comprises means for

performing a pattern match between the query (column 5, lines 29-33, Barnes)

and a first data string listing the first sequence of nodes and a second data string

listing the second sequence of nodes (Fig.13; Schultz).

Response to Arguments

Applicant's arguments with respect to newly amended claims 1,11,and 17 have been considered but are moot in view of the new ground(s) of rejection.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
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Technology Center 2100
November 2, 2006